### **Amendments to the Specification:**

Please amend the Specification as follows:

## Page 6 lines 14-20:

The counting circuit (30), as shown in Fig. 2, includes a signal amplifier <u>circuit</u> (31), a signal detection circuit (32), and a processor (33).

The signal amplifier <u>circuit</u> (31) is connected to the output of the vibration detector (11). The vibration detection signals are passed through a filter (311) and a signal amplifier (312), wherein-the <u>an</u> input of the filter (311) is connected to the vibration detector (11), while <u>whilst the an</u> output of the filter (311) is connected to the input of the signal amplifier (312).

### Page 6 line 21 to page 7 line 3:

A signal detection circuit (32) is connected to the output of signal amplifier <u>circuit</u> (31) for sensing vibration signals output by the signal amplifier <u>circuit</u> (31). The signal detection circuit (32) is formed by a low-pass filter (321), a voltage divider (322) and a comparator (323), wherein the voltage divider (322) is formed by two series connected resistors (R1, R2), and a grounded capacitor (C1), such that the low-pass filter (321) and the voltage divider (322) are both is connected to the a positive input E of the comparator (323) and the voltage divider (322) is connected to a positive input F of the comparator (323).

#### Page 7 lines 4 to 8:

The input of the processor (33) is connected to the output D of the comparator (323) in the signal detection circuit (32), while whilst the output of the processor (33) is connected

to the <u>negative positive</u> input F (reference voltage terminal) of the comparator (323), and the processor (33) is connected to the display unit (12) and the optional key pad (13).

### Page 7 line 19 to page 8 line 4:

The circuit actions of the counting circuit (30) are explained in reference to Figs. 2 and 3. When the vibration detector (11) outputs a weak vibration detection signal to the signal amplifier circuit (31) due to the positioning of the counter, the signal is first passed through the filter (311) for filtering out any high frequency noise, and then the signal is fed through the signal amplifier (312) for signal amplification. The amplified signal is then output to the signal detection circuit (32), wherein the signal first passes through a low-pass filter (321) to the positive negative input E of the comparator (323). At the same time, the amplified signal is branched through the voltage divider (322) to the negative positive input F (reference voltage) of the comparator (323).

### Page 8 lines 5 to 10:

When the vibration detector (11) does not output vibration detection signals, the signal amplifier (312) outputs a signal with positive potential to the signal detection circuit (32). Since the signal input to the <u>negative positive</u> input F (reference voltage) is fed through the voltage divider (322), the resultant voltage is less than the voltage on the <u>positive negative</u> input E, thus the comparator outputs a signal with positive potential.

### Page 8 lines 11 to 23:

With reference to Fig. 6A, the amplified vibration detection signal from the vibration detector (11) to the signal detection circuit (32) charges the capacitor C1 in the voltage divider (322), which causes the rate of voltage increase on the negative positive input F (reference voltage) of the comparator (323) to be slower than that on the positive negative

10/627,721 3 Amendment

input E. Therefore, when a surge signal with negative potential appears on the vibration detection signal line, the voltage on the positive negative input E is higher than that on the negative positive input F (reference voltage) due to the delay effect of the capacitor C1. Therefore, the comparator (323) outputs a signal with negative potential from output D to the processor (33) once a surge signal appears, indicating that the vibration detection signal has successfully detected the surge signal. Since the amplified vibration detection signal may carry after signals, which may cause false output by the comparator (323), the vibration signal has to pass through a filter.

# Page 8 line 24 to page 9 line 6:

With reference to Fig. 6B, when the processor (33) receives the surge signal from the comparator (323), the processor (33) outputs a pulse signal to the negative <u>positive</u> input F (reference voltage) to cause the previously charged capacitor C1 to discharge. Since the amplitude of after signals is usually small, the signal output of the processor (33) can be appropriately tuned to carry an amplitude slightly greater than after signals, such that the comparator (323) will not react to after signals.